

WHAT IS CLAIMED IS:

1. A drive circuit for controlling a switching device
ON/OFF, comprising

5 a short circuit detection means that detects short
circuit of the switching device,

a soft cutoff means that gradually decreases the gate
terminal voltage of the switching device when short
circuit is detected by the short circuit detection means,

10 a gate voltage detection means that detects the gate
terminal voltage of the switching device, and

an ON-pulse retention means that retains the drive
circuit output ON when the gate terminal voltage detected
by the gate voltage detection means exceeds a specified
value.

15 2. A drive circuit for a switching device according
to Claim 1, further comprising

a gate voltage clamp means that clamps the gate
voltage of the switching device, wherein

20 the gate voltage clamp means is operated by an output
signal of the ON-pulse retention means.

3. A drive circuit for a switching device according
to Claim 1, wherein

25 the switching device is one with voltage driven sense
function, which is provided with a gate terminal,
terminal No. 1, terminal No. 2, and terminal No. 3, where
the main current is applied between the terminal No. 1

and terminal No. 2 and the sense current in proportion to the main current is applied between the terminal No. 1 and terminal No. 3 by applying voltage to the gate terminal, and

5 the ON-pulse retention means retains the drive circuit output ON when the gate terminal voltage detected by the gate voltage detection means exceeds a specified value and also the sense voltage of a sense resistor, connected in series to the terminal No. 3 of the
10 switching device, exceeds a specified value.

4. A drive circuit for a switching device according to Claim 1, further comprising

a pulse width extension means that extends the pulse width of a pulse signal inputted to the drive circuit.